

26 Sub B1 31 (New). A method for antitumor therapy, comprising administering to a subject in need of such treatment, a therapeutically effective amount of a chemotherapeutic drug and an immunostimulating cytokine, wherein the cytokine is encapsulated in multilamellar liposomes (MLV), wherein said administration produces a greater therapeutic effect than a sum of the effects produced by administration of the chemotherapeutic drug alone or the immunostimulating cytokine alone.

32 (New). The method of Claim 31, wherein said cytokine is selected from the group consisting of interleukin-2 (IL-2), IL-12, IL-15, IL-18, IFN- γ , IFN- α , IFN- β , G-CSF and GM-CSF.

33 (New). The method of Claim 32, wherein said cytokine is IL-2.

34 (New). The method of Claim 31, wherein the liposomes comprise at least one lipid selected from the group consisting of dimyristoyl phosphatidyl choline (DMPC), dimyristoyl phosphatidyl glycerol (DMPG), 1,2-distearoyl-3-trimethylammonium propane (DSTAP), phosphatidyl choline, phosphatidyl ethanolamine and cholesterol.

35 (New). The method of Claim 34, wherein said cytokine is encapsulated in liposomes comprising DMPC and from

36

0 to 50 percent of at least one lipid selected from the group consisting of DMPC and DMPG.

36 (New). The method of Claim 35, wherein said liposome comprises DMPC and DMPG.

37 (New). The method of Claim 36, wherein the liposome comprises DMPC and DMPG in a molar ratio of about 9:1.

38 (New). The method of Claim 31, wherein said liposome encapsulated cytokine is administered after a time interval following administration of said chemotherapeutic drug, the time interval between administrations being such that the therapeutic effect of the combined administrations is greater than a sum of the therapeutic effects produced by administration of said chemotherapeutic drug alone and by administration of said immunostimulating cytokine alone.

39 (New). The method of Claim 31, wherein said chemotherapeutic drug is selected from the group consisting of a chemotherapeutic anthraquinone, cisplatin, and a topoisomerase I inhibitor.

40 (New). The method of Claim 39, wherein said chemotherapeutic drug is doxorubicin (adriamycin).

41 (New). The method of Claim 40, wherein said chemotherapeutic drug is a polyethylene glycol-coated liposomal doxorubicin.

06

42 (New). A method for antitumor therapy, comprising administering to a subject in need of such treatment, a therapeutically effective amount of a chemotherapeutic drug encapsulated in liposomes and an immunostimulating cytokine separately encapsulated in MLV, wherein said administration produces a greater therapeutic effect than a combination of the effects produced by administration of said liposome-encapsulated chemotherapeutic drug alone and said MLV-encapsulated immunostimulating cytokine alone.

43 (New). The method of Claim 42, wherein said cytokine is selected from the group consisting of interleukin-2 (IL-2), IL-12, IL-15, IL-18, IFN- γ , IFN- α , IFN- β , G-CSF and GM-CSF.

44 (New). The method of Claim 43, wherein said cytokine is IL-2.

45 (New). The method of Claim 42, wherein the liposomes encapsulating said immunostimulating cytokine comprise at least one lipid selected from the group consisting of dimyristoyl phosphatidyl choline (DMPC), dimyristoyl phosphatidyl glycerol (DMPG), 1,2-distearoyl-3-trimethylammonium propane (DETAP), phosphatidyl choline, phosphatidyl ethanolamine and cholesterol.

Re

46 (New). The method of Claim 45, wherein said cytokine is encapsulated in liposomes comprising DMPC and from 0 to 50 percent of at least one lipid selected from the group consisting of DMPG and DSTAP.

47 (New). The method of Claim 46, wherein said liposome comprises DMPC and DMPG.

48 (New). The method of Claim 47, wherein said liposome comprises DMPC and DMPG in a molar ratio of about 9:1.

49 (New). The method of Claim 42, wherein the liposomes encapsulating said chemotherapeutic drug comprise about 1-10 mole percent of a lipid having a polar head group derivatized with a polyethylene glycol (PEG) chain which has a molecular weight of between 750 and 10,000 dalton.

50 (New). The method of Claim 42, wherein said chemotherapeutic drug is selected from the group consisting of a chemotherapeutic anthraquinone, cisplatin, and a topoisomerase I inhibitor.

51 (New). The method of Claim 50, wherein said chemotherapeutic drug is doxorubicin (adriamycin).

52 (New). The method of Claim 51, wherein said chemotherapeutic drug is polyethylene glycol-coated liposomal doxorubicin.

af

53 (New). The method of Claim 42, wherein said liposome encapsulated cytokine is administered after a time interval following administration of said liposome encapsulated chemotherapeutic drug, the time interval between administration of said liposome encapsulated chemotherapeutic drug and said liposome encapsulated cytokine being such that the combined therapeutic effect of said administrations is greater than a sum of the therapeutic effects produced by administration of the liposome encapsulated chemotherapeutic drug alone and by administration of said MLV-encapsulated immunostimulating cytokine alone.